## Cancer genes also involved in embryogenesis, stem cell maintenance

Posted: June 14, 2010

**Created:** 14/06/2010 - 14:18

CIRM grantee Paul Knoepfler at UC Davis just published an interesting paper. He also publishes a blog, so we'll let him describe this findings in his own words:

" We just published a paper supported by CIRM funding showing that knocking out c- and N-myc in mESC leads to a wave of differentiation-associated gene expression, decreased cell cycling, and a moderate elevation of apoptosis. The myc-deficient mESC also fail to contribute to early embryogenesis. This is the first analysis of a role for myc genes in early embryogenesis.

We think that in part that Myc contributes to iPS formation by repressing differentiation-associated gene expression (ala Sridharan, et al).

So to induce pluripotency Myc appears to be doing what much the same job as it does to maintain pluripotency in ESC. A role in cell cycle is also involved.
Differentiation, May 26, 2010
CIRM Funding: Paul Knoepfler (RN2-00922)

A.A.

**Tags:** Knoepfler, iPS, University of California Davis